

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. Claims 1-10, 12-15, 20-24, 27, 28, 31, 34, 36, 41 and 43-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin (WO 01/92000).
2. In regards to claims 1, 3, 4, 6-10, 12-14, 44 and 47 Lin teaches a dual layer film comprising one layer that has been perforated and one layer that has not been perforated (page 3 lines 35-32). Lin teaches that the perforated layer may comprise polyethylene terephthalate (hereinafter PET) and the unperforated layer comprises a polyester (page 7 lines 17-32). In regards to Applicant's arguments concerning the thickness of the film layers, the size and density of the perforations it has long been an axiom of United States patent law that it is not inventive to discover the optimum or workable ranges of result-effective variables by routine experimentation. *In re Peterson*, 315 F.3d 1325, 1330 (Fed. Cir. 2003) ("The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages."); *In re Boesch*, 617 F.2d 272, 276 (CCPA 1980) ("[D]iscovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art."); *In re Aller*, 220 F.2d 454, 456 (CCPA 1955) ("[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation."). "Only if the 'results of optimizing a variable' are 'unexpectedly good' can a patent be obtained for the claimed

critical range." *In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997) (quoting *In re Antonie*, 559 F.2d 618, 620 (CCPA 1977)). Therefore absent a showing of criticality with respect to " thickness of the film layers and the size and density of the perforations " (a result effective variable), it would have been obvious to a person of ordinary skill in the art at the time of the invention to adjust the " thickness of the film layers and the size and density of the perforations " through routine experimentation to values, including those presently claimed in order to achieve "a package which finely controls the final condition of that packaged therein (page 14 lines 22-30)". It is noted that as Lin uses the same materials as those preferred by applicants the film must necessarily be heat sealable as well as have the same water vapor transmission rate. It is noted that in regards to claim 47 the optionally perforated heat seal layer is not included.

3. In regards to claim 2 Lin teaches that the film is permeable to water vapor and air (which one of ordinary skill in the art would realize contains oxygen)(page 5 lines 5-10).

4. In regards to claim 5 Lin teaches that the unperforated layer is disposed on a surface of the perforated (substrate) layer (page 5 lines 25-32 and figures 2B and 2C).

5. In regards to claim 15 this is just a duplication of parts (See MPEP 2144.04 VI) since Lin has previously stated that polyesters can be used as both a heat seal layer and the substrate layer. The courts have held that mere duplication of parts has no patentable significance unless it results in a new and unexpected result.

6. In regards to claims 20, 21 and 45 Lin et al. teach that it is preferable that the film is transparent, and therefore would have a light transmittance at or near 100% (page 12 lines 26-32), it would be obvious to one of ordinary skill in the art at the time of the

invention to limit the haze in transparent sections in order to provide a clear view of the item packaged, this would include embodiments below 6%.

7. In regards to claims 22-24, 28, 41 and 43 Lin previously taught all the limitations associated with the article and further teaches that the film is formed perforating the layer then adding the other layers (page 4 lines 1-14). It is further noted that the broadest definition of the term laminated is "to make by uniting several layers" (<http://dictionary.reference.com/browse/laminate>).

8. In regards to claim 27 while Lin is silent with regards to the barrier layer being extruded they did teach that it is known in the art to extrude layers for breathable films (page 2 lines 9-18).

9. In regards to claim 34 while Lin does not specifically mention that the containers contain cut plants, they do specifically mention that the containers are to hold foodstuffs, of which fruits and vegetables are common food items that are also cut plants (page 13 lines 30-32).

10. In regards to claim 36 Lin teaches that the container may be used for foods that are cooked in a microwave oven (page 14 lines 1-15).

11. In regards to claim 46 Lin teaches that it is not the material of the barrier layer but rather a sealing layer that fills in the perforations, therefore 0% of the perforations are filled by the unperforated barrier layer (page 3 lines 26-32).

12. Claims 11 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin (WO 01/92000) in view of Rogers (US 4,918,156).

13. As stated above Lin teaches films for use in packaging as well as methods for making said films, but however is silent regarding using copolyesterether as the substrate.
14. Rogers teaches polyester resins which offer improved processability during manufacture (column 1 lines 5-6).
15. Rogers teaches that this polyester is a copolyesterether formed from 1,4-cyclohexanedimethanol (column 1 lines 5-10).
16. One of ordinary skill in the art at the time of the invention would be motivated to modify the package of Lin with the polyester of Rogers, because the polyester of Rogers offers improved processability during manufacture (column 1 lines 5-10) and a decrease in film splitting (column 2 lines 49-50).
17. Claims 16, 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin (WO 01/92000) in view of Dominguez De Walter et al. (US 6,787,630 and hereinafter Dominguez).
18. As stated above Lin teaches films for use in packaging as well as methods for making said films, but however is silent regarding the heat sealable layer comprising ethylene glycol, terephthalic and isophthalic acid.
19. Dominguez teaches heat stable polyesters which are easily reproduced (column 1 lines 7-10).
20. In regards to claim 16 Dominguez teaches copolymers derived from ethylene glycol, and terephthalic and isophthalic acid (column 13 lines 1-10). In regards to the

concentrations it has been found that absent a showing of criticality with respect to "acid ratios" (a result effective variable), it would have been obvious to a person of ordinary skill in the art at the time of the invention to adjust the "acid ratios" through routine experimentation to values, including those presently claimed in order to achieve "polyesters with good color, and reduced degradation". It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

21. One of ordinary skill in the art at the time of the invention would be motivated to modify the package of Lin with the copolyester of Dominguez because the copolyester of Dominguez offers outstanding clarity and coloring neutrality (column 1 lines 15-16).

22. Claims 17, 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin (WO 01/92000) in view of McConnell et al. (US 4,450,250).

23. As stated above Lin teaches films for use in packaging as well as methods for making said films, but however is silent regarding a copolyester derived from ethylene glycol, terephthalic acid and cyclohexanedimethanol.

24. McConnell et al. teach adhesive polymers.

25. In regards to claim 17 McConnell et al. teach a known adhesive polymer which is derived from ethylene glycol, terephthalic acid as well as 1,4-cyclohexanedimethanol (column 3 lines 51-60).

26. One of ordinary skill in the art at the time of the invention would be motivated to modify the film of Lin with the polyester adhesive of McConnell et al. because the

adhesive composition of McConnell et al. which is well known in the art offers an ability to bind to a wide variety of materials as well as offering good cohesive and bond strengths and improved processing characteristics (column 1 lines 11 and 18-23).

27. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin (WO 01/92000) in view of Harrington (US 4,172,824).

28. As stated above Lin teaches films for use in packaging as well as methods for making said films, but however is silent regarding a specific heat seal composition comprising an aromatic dicarboxylic acid, and aliphatic dicarboxylic acid and a glycol.

In regards to claims 18 and 19 Harrington et al. teach a hot melt adhesive compound which comprises terephthalic acid and adipic acid and the glycol component is ethylene glycol (column 2 lines 20-30). Harrington et al. disclose the use of about 60% aromatic dicarboxylic, while the present claims require 55% aromatic dicarboxylic.

It is apparent, however, that the instantly claimed amount of 55% and that taught by Harrington et al. are so close to each other that the fact pattern is similar to the one in In re Woodruff , 919 F.2d 1575, USPQ2d 1934 (Fed. Cir. 1990) or Titanium Metals Corp. of America v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed.Cir. 1985) where despite a "slight" difference in the ranges the court held that such a difference did not "render the claims patentable" or, alternatively, that "a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close

enough so that one skilled in the art would have expected them to have the same properties".

In light of the case law cited above and given that there is only a "slight" difference between the amount of about 60% disclosed by Harrington and the amount disclosed in the present claims, it therefore would have been obvious to one of ordinary skill in the art that the amount of 55% disclosed in the present claims is but an obvious variant of the amounts disclosed in Harrington et al., and thereby one of ordinary skill in the art would have arrived at the claimed invention.

29. One of ordinary skill in the art at the time of the invention would be motivated to modify the film of Lin with the polyester component of Harrington et al. because the polyester component of Harrington et al. offers an excellent softening points and inherent viscosities (column 2 lines 22-33).

30. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin (WO 01/92000) in view of Wang et al. (6,143,818).

31. As stated above Lin teaches films for use in packaging as well as methods for making said films, but however is silent regarding the method of applying an adhesive and using EVOH as an adhesive.

32. In regards to claim 25 Wang et al. teach spray melt blown methods as common methods for applying adhesives (column 1 lines 50-57).

33. In regards to claim 26 Wang et al. teach an adhesive which comprises ethylene vinyl alcohol (claim 11).

34. One of ordinary skill in the art at the time of the invention would be motivated to modify the invention of Lin with the adhesive of Wang et al. because the adhesives of Wang et al. offer improved cohesive strength as well as excellent heat stability (column 3 lines 20-27).

35. Claims 31, 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin (WO 01/92000) in view of Zobel (US 5,832,699).

36. As stated above Lin teaches films for use in packaging as well as methods for making said films, but however is silent regarding cut plants being included in the container.

37. Zobel teaches films which comprise a perforated layer (column 4 lines 1-20).

38. In regards to claims 31 34 and 35 Zobel et al. teach that it is known in the art that films with perforations are used to store vegetables, which are cut plant material (column 3 lines 55-63).

39. One of ordinary skill in the art at the time of the invention would be motivated to modify the invention of Lin with that of Zobel et al. because the invention of Zobel et al. offers an ability to regulate a changing atmosphere in a package (column 1 lines 17-30).

40. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lin (WO 01/92000) in view of Varriano-Martson (US 6,441,340 hereinafter Varriano).

41. As stated above Lin teaches films for use in packaging as well as methods for making said films, but however is silent regarding the film being used as a lid for a package.
42. In regards to claim 33 Varriano teaches containers with lids made from breathable films (column 18 lines 36-50).
43. One of ordinary skill in the art at the time of the invention would be motivated to modify the invention of Akao with that of Varriano because the invention of Lin would benefit from the modifying or controlling flow of oxygen and carbon dioxide in and out of a container (column 1 lines 14-20).

Response to Arguments

44. Applicant's arguments, see arguments, filed 02/01/10, with respect to the previous 35 U.S.C. 112 1st paragraph rejection of the claims have been fully considered and are persuasive. The previous 112 1st paragraph rejection of the claims has been withdrawn.
45. In regards to Applicant's arguments regarding the optimization of the ranges, Lin et al. provide motivation for optimizing the density and size of the perforations and the thickness of the layer by teaching that "the final condition of the food can be finely controlled by using different recipes in combination with the number of gaps, shape of the gaps, density of the gaps, distribution of the gaps, film thickness of the packaging bag, starting material of the packaging bag and the material used in the sealing layer" (page 14 lines 23-32). Not only is the process of adjusting each these parameters well

known to one of ordinary skill in the prior art, Lin et al. also teach how to adjust some of the parameters such as size and shape of the gaps. It is through this routine optimization that the values in the present claims, including size and density of the gaps, thickness of the layers and WVTR are obtained.

46. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this instance Lin et al. provide the reasoning as to why one of ordinary skill in the art would vary the film thickness, density and size of the gaps in order to finely control the final condition of the food.

47. In regards to Applicant's arguments with regard to the thickness, as set forth in MPEP 716.02(d), whether unexpected results are the results of unexpectedly improved results or a property not taught by the prior art, "objective evidence of nonobviousness must be commensurate in scope with the claims which the evidence is offered to support". In other words, the showing of unexpected results must be reviewed to see if the results occurred over the entire claimed range, *In re Clemens*, 622F.2d 1029, 1036, 206 USPQ 289, 296 (CCPA 1980). Applicants have not provided data to show that the unexpected results do in fact occur over the entire claimed range of "no more than 12

µm". It is further noted that the declaration appears to be directed towards the Akao reference which is no longer being used in the rejection.

48. Examiner notes that while Rogers, Dominguez, McConnell, Harrington, Wang and Varriano do not disclose all the features of the present claimed invention, they are used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, and in combination with the primary reference, discloses the presently claimed invention. If the secondary reference contained all the features of the present claimed invention, it would be identical to the present claimed invention, and there would be no need for secondary references.

Conclusion

49. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIK KASHNIKOW whose telephone number is (571)270-3475. The examiner can normally be reached on Monday-Friday 7:30-5:00PM EST (Second Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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